



STATE OF CALIFORNIA
 State Energy Resources
 Conservation and Development Commission

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| In the Matter of: |) | Docket No. 98-AFC-4C |
| |) | Order No. 03-0416-1(c) |
| SUNRISE POWER PROJECT |) | |
| Petitions to Clarify Emission Monitoring |) | COMMISSION ORDER APPROVING |
| Requirements and to Allow a Temporary |) | PROJECT MODIFICATION |
| <u>Increase in Commissioning Emissions</u> | | |

On February 7 and February 20, 2003, the California Energy Commission (Energy Commission) received petitions from the Sunrise Power Company to modify air quality Conditions of Certification to clarify emission monitoring requirements and to allow for a temporary increase in commissioning emissions. At a regularly scheduled Business Meeting on April 16, 2003, the Energy Commission considered staff's analysis and approved the revised and new air quality Conditions of Certification in accordance with Title 20, section 1769(a)(3) of the California Code of Regulations, clarifying emission monitoring requirements and allowing a temporary increase in emissions during commissioning.

COMMISSION FINDINGS

Based on staff's analysis, the Energy Commission finds that:

- A. There will be no new or additional unmitigated significant environmental impacts associated with the proposed change. Potential exceedance of oxides of nitrogen and carbon monoxide emission limits during commissioning will be mitigated through the surrender of emission reduction credits.
- B. The facility will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources code section 25525.
- C. The change will be beneficial to the project owner by clarifying emission monitoring requirements and by allowing for operational efficiency during the commissioning phase.
- D. There has been a substantial change since the Energy Commission certification based on the project owner's re-evaluation of operational issues that were not available during the siting process.

ORDER

The California Energy Commission hereby approves the clarification of emission monitoring requirements and a temporary increase in commissioning emissions.

NEW AND REVISIONS TO EXISTING CONDITIONS OF CERTIFICATION

(Deleted text is shown in ~~striketrough~~, and new text is underlined).

AQ-7 CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitor(s) dedicated to this unit for NO_x, CO, and O₂. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60, Appendices B and F, and 40 CFR part 75, and District-approved protocol and shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided the CEM(s) pass the relative accuracy requirement specified in condition AQ-23. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits in Conditions AQ-14, -15, -16, and -17. [District Rule 2201]

Verification: The project owner shall make the site available for inspection by representatives of the District, CARB and the Commission.

AQ-10 Startup is defined as the period beginning with turbine initial firing ~~until the unit meets the lbs/hr and ppmvd emission limits in Condition AQ-15~~. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown duration shall not exceed a time period of ~~40 minutes~~ 4 hours each per occurrence. [District Rule 2201 and 4001]

Verification: The project owner shall provide records of the emissions and operations as part of the quarterly reports of Condition AQ-31.

AQ-14 During startup or shutdown of any combustion turbine generator(s), combined emissions from the two CTGs (S-3746-1 and '-2) shall not exceed the following:

For simple cycle mode of operation

NO_x 145.24 lbs in any one hour

CO 364.86 lbs in any one hour

For combined cycle mode of operation

NO_x 700 lbs in any one hour

CO 1,580 lbs in any one hour

Protocol: If any unit is in either startup or shutdown mode during any portion of a clock hour, the facility will be subject to ~~AQ-14~~ aforementioned limits during that clock hour.

Verification: The project owner shall provide records of the emissions as part of the quarterly reports of Condition AQ-31.

AQ-15 Emission rates from each CTG, except during startup and shutdown events, shall not exceed any of the following:

[District Rules 2201, 4001, and 4703]

While operating in simple cycle mode:

| | |
|---------------------------------------|--------------------------|
| PM10 | 9 lbs/hr |
| SO _x (as SO ₂) | 3.85 lbs/hr. |
| NO _x (as NO ₂) | 60.93 lbs/hr. 9.0 ppm |
| VOC | 2.81 lbs/hr. 1.3 ppm |
| CO | 29.14 lbs/hr. 7.5 ppm |

NO_x (as NO₂) ~~emission~~ mass and concentration emission limits are ~~is a~~ one-hour rolling averages. All other ~~emission~~ mass and concentration emission limits are three-hour rolling averages.

While operating in combined cycle mode:

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|--|---|
| PM10: | 17.8 lbs/hr |
| SO _x (as SO ₂): | 1.55 lbs/hr |
| NO _x (as NO ₂): | 15.96 lbs/hr and 2.0 ppmvd @ 15% O ₂ |
| VOC: | 5.51 lbs/hr and 2.0 ppmvd @ 15% O ₂ |
| CO: | 19.22 lbs/hr and 4.0 ppmvd @ 15% O ₂ |
| Ammonia: | 10 ppmvd @ 15% O ₂ |

NO_x (as NO₂) ~~emission~~ mass and concentration emission limits are ~~is a~~ one-hour rolling averages. Ammonia emission concentration limit is a 24-hour rolling average. All other ~~emission~~ mass and concentration emission limits are three-hour rolling averages.

Protocol: Each one-hour period in a one-hour rolling average will commence on the hour. Each one-hour period in a 3-hour rolling average will commence on the hour. The 3-hour average will be compiled from the three most recent 1-hour periods. 24-hour average emissions will be compiled for a 24-hour period starting and ending at twelve-midnight. If a unit is in either startup or shutdown mode during any portion of a clock hour, that unit will not be subject to ~~AQ-15~~ aforementioned limits during that clock hour. [District Rule 2201]

Verification: The project owner shall provide records of the emissions as part of the quarterly reports of Condition AQ-31.

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AQ-49 ~~By No more than~~ two hours after turbine initial firing, CTG exhaust emissions shall not exceed any of the following:

NO_x (as NO₂): 10.3 ppmv @ 15% O₂

CO: 25. ppmv @ 15% O₂

[District Rule 4703]

Compliance with the aforementioned limits will commence on the clock hour following the 120th minute after initial firing. These emission limits are three hour rolling averages.

Verification: The project owner shall provide records of the emissions as part of the quarterly reports of Condition AQ-31.

PROPOSED NEW CONDITION OF CERTIFICATION AQ-60

(Consistent with the corresponding condition in the District's Authority to Construct)

AQ-60 The CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NO_x concentration for the purpose of calculating ammonia slip. The owner/operator shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, the analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the owner/operator shall take appropriate corrective action and then repeat the CD check. [District Rule 2201]

Verification: The project owner shall provide either the CD checks that resulted in the analyzer being declared out-of-control or a statement that no CD checks resulted in the analyzer being declared out-of-control as part of the quarterly reports of Condition AQ-31.

PROPOSED NEW CONDITION OF CERTIFICATION AQ-61

(Consistent with the constraints and reporting requirements of the District Variance No. S-02-46R issued on December 11, 2002)

AQ-61 Relief shall be granted from Conditions of Certification AQ-7, AQ-10, AQ-14, AQ-15, AQ-16, AQ-20, AQ-22, AQ-49 and AQ-50 for the duration of the Commissioning period of the Sunrise Phase II combined cycle power project.

During Commissioning, NO_x emissions shall not exceed 17,770 lbs/day.

During Commissioning but prior to the oxidation catalyst being installed, CO emissions shall not exceed 27,513 lbs/day.

During Commissioning and following the installation of the oxidation catalyst, CO emissions shall not exceed 5,703 lbs/day.

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Commissioning activities shall not exceed 120 days cumulatively of operation. Commissioning activities shall occur between March 1, 2003 and December 31, 2003.

The owner/operator shall record and quantify, via CEMS or District approved source testing, the actual NOx and CO emissions associated with the Commissioning period, except for the first 24-hours after the first initial firing.

Verification: The project owner shall provide records of recorded emissions and operation as part of the quarterly reports of Condition AQ-31.

IT IS SO ORDERED.

STATE OF CALIFORNIA
ENERGY RESOURCES
CONSERVATION AND
DEVELOPMENT COMMISSION

April 16, 2003

DATE

WILLIAM J. KEESE, Chairman